

NASA STI Metadata – 2004

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NASA CASI Data Dictionary (record exchange format)

Total Fields =105

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
013a	Patent Numbers	Alphanumeric; Repeat; Length=30	Numbers assigned to a patent or patent application.	US-Patent-1057582; US-Patent-Appl-SN-579455; GB-Patent-2-140-004-A
013d	Patent Filed Date	Alphanumeric; Repeat; Length=50	The textual date the application for the patent was filed with the Patent Office.	12 May 1997
017c	Copyright Indicator	Alphanumeric; Non-repeat; Length=30	Indicates if a document is protected by copyright.	
020a	ISBN	Alphanumeric; Non-repeat; Length=30	The International Standard Book Number (ISBN) assigned to a book, technical report, or other monograph; may include qualifying information.	ISBN 0-8389-3211-8 (Paper); ISBN 0-87779-408-1; ISBN 0-12-118660-1
022a	ISSN	Alphanumeric; Non-repeat; Length=30	The International Standard Serial Number (ISSN) assigned to a periodical.	ISSN 0360-5280
035z	Accession Number (Pre-1998)	Alphanumeric; Non-repeat; Length=8	An identifying number from the RECON database used from 1962 to 1997.	95N12743, 92X71523
041a	Document Language	Alphanumeric; Repeat; Length=50	Identifies the language or languages of the document.	French
041b	Summary Language	Alphanumeric; Repeat; Length=50	The language (or languages) of a summary, abstract, or synopsis as it occurs in the original document. Blank unless the summary language differs from the Document Language.	English
041h	Original Language	Alphanumeric; Non-repeat; Length=50	The original language of a document translated into English	Japanese
0722	Subject Category Code Source	Alphanumeric; Group-repeat; Length=50	The name (or acronym/abbreviation) of the source of the subject category assigned to a record (the source being a controlled category list or classification scheme).	

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
072a	Subject Category Code	Alphanumeric; Group-repeat; Length=10	A number that represents a subject category from a controlled classification scheme.	09; 43
072b	Subject Category Text	Alphanumeric; Group-repeat; Length=80	The text name of the NASA subject category.	Spacecraft Instrumentation; Plasma Physics; Aircraft Stability and Control
088a	Report Number	Alphanumeric; Repeat; Length=60	A unique number assigned to a document by the originator.	NASA/CR-1998-123456
090a	Document ID (CASI)	Alphanumeric; Non-repeat; Length=11	A unique 11-digit number assigned to a record when loaded to BASIS.	19970430740 (format = yyyynnnnnnn)
245a	Title (Including Subtitle)	Alphanumeric; Non-repeat; Length=1000	The English title of the document. Includes subtitles.	Lightweight deployable antenna system: Fatigue tests on flexible battens
245d	Title Extension	Alphanumeric; Non-repeat; Length=1000	Words or phrase supplied to clarify a nondescriptive title.	acoustic impedance of curved multilayered duct liners
245e	Title Supplement	Alphanumeric; Non-repeat; Length=250	Qualifying text associated with the document title.	Revised; Degree awarded by... on...
245n	Title: Number of Part	Alphanumeric; Non-repeat; Length=50	The number of the part associated with the document.	Part 2
245p	Title: Name of Part	Alphanumeric; Non-repeat; Length=300	The name of the part associated with the document title.	Test data and appendices
246a	Foreign Title	Alphanumeric; Non-repeat; Length=1000	The non-English title.	Tanso junkan moderuringu notameno kaiyo daijunksan moderu
246n	Foreign Title: Number of Part/Section	Alphanumeric; Non-repeat; Length=50	The non-English part number.	

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
246p	Foreign Title: Name of Part/Section	Alphanumeric; Non-repeat; Length=300	<i>The non-English name of part.</i>	
246y	Foreign Title: Language	Alphanumeric; Non-repeat; Length=50	<i>The language of the non-English title.</i>	<i>French</i>
260a	Publication Place	Alphanumeric; Non-repeat; Length=250	<i>The city, state or province location where the document was published</i>	<i>Baltimore, MD</i>
260b	Publisher	Alphanumeric; Non-repeat; Length=250	<i>The organization that published the document.</i>	<i>American Inst. of Aeronautics and Astronautics; Deutsche Versuchstalt fuer Luftfahrt</i>
260c	Publication Date (Numeric, YYYYMMDD)	Date(numeric); Non-repeat; Length=8	<i>The publication date in YYYYMMDD format.</i>	<i>19941119; 19930500; 19990000</i>
260d	Publication Date (Textual)	Alphanumeric; Non-repeat; Length=50	<i>The publication date in text format. May contain complete dates, partial dates (where the specific month or day is unknown), inferred dates, and references to quarters or seasons.</i>	<i>May 23, 2001; November 1995; Spring 1994; May-June 1993; [1996]</i>
260g	Publication Year	Alphanumeric; Non-repeat; Length=4	<i>Year in which the publication was produced.</i>	<i>1997</i>
260z	Country of Publication	Alphanumeric; Non-repeat; Length=50	<i>The country location of the publisher.</i>	<i>United States</i>
300a	Total Pages	Alphanumeric; Non-repeat; Length=20	<i>Total number of pages in a document.</i>	<i>25</i>
300b	Other Physical Characteristics	Alphanumeric; Non-repeat; Length=300	<i>Indicates characteristics such as illustrations, number of volumes, non-print format, etc.</i>	<i>3 volumes; Original contains color illustrations; Videotape: playing time 45 min.</i>
300e	Accompanying Material	Alphanumeric; Non-repeat; Length=250	<i>Describes supplementary material included with the document.</i>	<i>Includes CD-ROM supplement; Supplemental diskette</i>

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
355a	Security Classification	Alphanumeric; Non-repeat; Length=23	The document's security classification.	
359a	Limits on Distribution: Authorized Users	Alphanumeric; Non-repeat; Length=200	Terms indicating the classes of users authorized to access or receive the information.	Unrestricted-Publicly Available; US Govt Agencies and Contractors
359c	Limits on Distribution: Restriction on Access	Alphanumeric; Non-repeat; Length=85	Statements indicating any export control or other restriction limiting access to the information.	
359f	Limits on Distribution: Special Distribution Authorization	Alphanumeric; Non-repeat; Length=200	Statements indicating special distribution authorizations for copyrighted information, including user classes, organizational agreements, and required fees.	
359f_note	Limits on Distribution: Special Distribution Authorization Note	Alphanumeric; Non-repeat; Length=50	An extension of the Special Distribution Authorization field that identifies the NASA contract, grant, or cooperative agreement for the case when a NASA contractor or grantee claims copyright.	under NASA contract NAG3-234
440a	Series Title	Alphanumeric; Non-repeat; Length=1000	The collective title for separately published documents issued a collection.	
440n	Series Number	Alphanumeric; Non-repeat; Length=20	A number associated with the series. The number the cited document carries in the series order.	no. 234
440p	Series Part	Alphanumeric; Non-repeat; Length=100	The part name that the document carries relative to the series.	Part 4
440v	Seiries Volume	Alphanumeric; Non-repeat; Length=50	The volume number that the document carries relative to the series	Volume 6
500a	General Note	Alphanumeric; Non-repeat; Length=500	Contains miscellaneous information not covered by another field	Sponsored in part by GCD Technologies
503a	Bibliographic History Note	Alphanumeric; Non-repeat; Length=500	Information indicating the relationship of the described work to other works or other editions of the same work.	La Recherche Aerospatiale (Paris, France) Sep. 1985 p 13-29

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
509a	Document Type	Alphanumeric; Non-repeat; Length=30	Term describing the bibliographic nature of the document.	Technical Report; Patent; Patent Application; Journal Article
513a	Progress Report Type	Alphanumeric; Non-repeat; Length=150	Type of progress report usually referring to the general period of coverage (as in Annual, Quarterly).	Final Report
513b	Progress Report Period Covered	Alphanumeric; Non-repeat; Length=50	The period covered by a progress report, in date format.	1990-1991
520b	Abstract	Alphanumeric; Non-repeat; Length=10000	A concise, accurate summary of the content of the document.	
520q	Abstract Language	Alphanumeric; Non-repeat; Length=50	Language of the abstract	German
520z	Abstract Source	Alphanumeric; Non-repeat; Length=80	The person or organization credited with writing and/or compiling the abstract. (The value "Author" is used if the abstract was written by the author.)	Author; CASI; Author (CISTI); NASDA; Author (NASDA)
536b	Contract Number	Alphanumeric; Repeat; Length=30	A number that identifies the contract or purchase order that funded the work reported.	NAS3-703; NCCI-47; NCA7-345; NASA Order W-12303
536c	Grant Number	Alphanumeric; Repeat; Length=30	A number that identifies the cooperative agreement or grant that funded the work reported.	NAG1-1552; NAGW 3829
536d	Project/Task Number	Alphanumeric; Repeat; Length=30	The project, task, or work unit number that funded the work reported.	RTOP 694-03-0A
538a	Technical Details Note	Alphanumeric; Non-repeat; Length=500	Contains technical information about an item, including programming language, computer requirements, etc.	

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
590a	Imprint Note, 1972-Present (Use Varies)	Alphanumeric; Non-repeat; Length=3000	<i>A reference to the source of the item. (A composite field that is entered automatically for certain open literature records. The field includes the converted contents of STIMS open literature records, field 171, which combined data from several specific fields.)</i>	
590b	Imprint Note, G File, 1962-1963	Alphanumeric; Non-repeat; Length=3000	<i>Compiles the title, author names, affiliation, publication date, place of publication, into one field.</i>	
590d	Presentation Note	Alphanumeric; Non-repeat; Length=3000	<i>Contains information on the presentation of a paper at a conference or meeting. (Used with the mainframe/STIMS system. For the BASIS system, see 711, 719.)</i>	
591a	Extra Note Field 1	Alphanumeric; Non-repeat; Length=3000	<i>An extra note field used for 1996 conversion.</i>	
592a	Extra Note Field 2	Alphanumeric; Non-repeat; Length=3000	<i>An extra note field used for 1996 conversion.</i>	
593a	Extra Note Field 3	Alphanumeric; Non-repeat; Length=3000	<i>An extra note field used for 1996 conversion.</i>	
599a	Author Note (Tech Briefs)	Alphanumeric; Non-repeat; Length=150	<i>Author Note (for technical briefs only)</i>	
650a	NASA Major Index Term - Controlled	Alphanumeric; Repeat; Length=80	<i>Terms selected from the NASA Thesaurus indicating major concepts of the document.</i>	<i>TURBOFAN ENGINES; ROTOR AERODYNAMICS; ENGINE DESIGN; ROTOR STATOR INTERACTIONS</i>
653a	Uncontrolled Index Term - Identifier	Alphanumeric; Repeat; Length=80	<i>Index terms that are not contained in a subject thesaurus or constructed by standard subject heading/thesaurus-building conventions.</i>	
659a	NASA Minor Index Term - Controlled	Alphanumeric; Repeat; Length=80	<i>Terms selected from the NASA Thesaurus indicating minor or secondary concepts of the document.</i>	<i>DATA REDUCTION; WEIGHT ANALYSIS; IMAGE ANALYSIS; IONIZING RADIATION</i>

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
700a	Personal Name	Alphanumeric; Group-repeat (700/710x_AA) ; Length=80	<i>Personal authors or editors of the document.</i>	<i>Knight, N. F.; Mueller, Mark A.; Blumberg, S. [last-name], [first-name/initial] [middle- name/initial]</i>
700e	Personal Name Relation to Document	Alphanumeric; Group-repeat (700/710x_AA) ; Length=30	<i>Indicates the role of the personal name in relationship to the document.</i>	<i>Editor</i>
700j	Personal Name - Incomplete List of Authors	Alphanumeric; Non-repeat; Length=6	<i>A flag indicating the presence of more authors on the original document than are cited in the record. Equivalent to indicating "et. al."</i>	
710a_AA	Author Affiliation	Alphanumeric; Group-repeat (700/710x_AA) ; Length=600	<i>The name of the corporation, government agency, university, or other organization for which the author worked when writing the document.</i>	<i>Maryland Univ.; Phillip (George) and Son Ltd.; State Dept.</i>
710a_FS	Financial Sponsor	Alphanumeric; Group-repeat (710x_FS); Length=600	<i>The name of the corporation, government agency, university, or other organization that provided financial support for the document.</i>	
710a_MS	Meeting Sponsor	Alphanumeric; Group-repeat (710x_MS); Length=600	<i>The name of the corporation, government agency, university, or other organization recognized as one of the primary sponsors of a meeting.</i>	
710a_OS	Organization Source	Alphanumeric; Group-repeat (710x_OS); Length=600	<i>Organization or other entity responsible for the content of the document.</i>	
710b_AA	Author Affiliation: Subordinate Unit	Alphanumeric; Group-repeat (700/710x_AA) ; Length=250	<i>A subordinate unit within the organization for which the author worked.</i>	
710b_FS	Financial Sponsor: Subordinate Unit	Alphanumeric; Group-repeat (710x_FS); Length=250	<i>A subordinate unit within the organization that provided funding for the work reported.</i>	

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
710b_MS	Meeting Sponsor: Subordinate Unit	Alphanumeric; Group-repeat (710x_MS); Length=250	<i>A subordinate unit within the organization that sponsored the meeting.</i>	
710b_OS	Organization Source: Subordinate Unit	Alphanumeric; Group-repeat (710x_OS); Length=250	<i>A subordinate unit within the organization responsible for the work reported.</i>	<i>Applied Technologies Div.; Economic Development Lab.; Physics Dept.</i>
710g_AA	Author Affiliation Country	Alphanumeric; Group-repeat (700/710x_AA) ; Length=50	<i>Country of the author affiliation.</i>	
710g_FS	Financial Sponsor Country	Alphanumeric; Group-repeat (710x_FS); Length=50	<i>Country of the organization that provided financial support for the document.</i>	
710g_MS	Meeting Sponsor Country	Alphanumeric; Group-repeat (710x_MS); Length=50	<i>Country of the organization that sponsored a meeting.</i>	
710g_OS	Organization Source Country	Alphanumeric; Group-repeat (710x_OS); Length=50	<i>Country of the organization source.</i>	
710j_AA	Author Affiliation Type	Alphanumeric; Group-repeat (700/710x_AA) ; Length=50	<i>Term indicating the kind of organization with reference to the US NASA database.</i>	
710j_FS	Financial Sponsor Type	Alphanumeric; Group-repeat (710x_FS); Length=50	<i>Term indicating the kind of organization with reference to the US NASA database.</i>	
710j_MS	Meeting Sponsor Type	Alphanumeric; Group-repeat (710x_MS); Length=50	<i>Term indicating the kind of organization with reference to the US NASA database.</i>	

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
710j_OS	Organization Source Type	Alphanumeric; Group-repeat (710x_OS); Length=50	Term indicating the kind of organization with reference to the US NASA database.	
710u_AA	Author Affiliation Location and Country	Alphanumeric; Group-repeat (700/710x_AA) ; Length=350	The city, state or province, and country location of the author affiliation.	
710u_FS	Financial Sponsor Location and Country	Alphanumeric; Group-repeat (710x_FS); Length=350	The city, state or province, and country location of the financial sponsor.	
710u_MS	Meeting Sponsor Location and Country	Alphanumeric; Group-repeat (710x_MS); Length=350	The city, state or province, and country location of the meeting sponsor.	
710u_OS	Organization Source Location and Country	Alphanumeric; Group-repeat (710x_OS); Length=350	The city, state or province, and country location of the organization source.	
711a	Meeting Name	Alphanumeric; Group-repeat (711); Length=1000	The title of the meeting; may include a secondary title, the name of the track, section or other group of sessions.	First Space Congress; US-USSR Symposium on Comprehensive Analysis of Turbulence
711c	Meeting Location	Alphanumeric; Group-repeat (711); Length=250	The city, state or province location of the meeting.	Washington, DC; Cocoa Beach, Florida
711d	Meeting Date (Numeric, YYYYMMDD)	Date(numeric); Group-repeat (711); Length=8	The numeric date of the start of the meeting in YYYYMMDD format.	19860101; 19861210
711f	Meeting Date (Textual)	Alphanumeric; Group-repeat (711); Length=50	The start and end date, or only date, of a meeting in text format; may contain partial dates.	11-14 Jan. 1995; 1986; 10 Dec. 1986;

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
711n	Meeting Number / Part Number or Name	Alphanumeric; Group-repeat (711); Length=50	Ordinal number designation for a meeting and the part number and/or name for meeting sections, etc.	32nd; 3rd; 1st
711z	Country of Meeting	Alphanumeric; Group-repeat (711); Length=50	The country where the meeting was held.	Japan
773d	Source Publication Date	Alphanumeric; Non-repeat; Length=50	The textual publication date of the source publication.	Dec. 1994; Spring 1998; 1997; Jun. 20, 1995; May 2, 1996
773i	Source Publication Issue	Alphanumeric; Non-repeat; Length=50	The issues and/or part numbers of the source publication.	no. 2, part 8
773p	Source Publication Page Range	Alphanumeric; Non-repeat; Length=50	The page range of an analytic subsidiary, paper, chapter or journal article in the source publication.	12-24; pp ii-vi and 78-92
773r	Source Publication Report Number	Alphanumeric; Non-repeat; Length=60	A unique number assigned to the source publication by the originator.	
773t	Source Publication Title	Alphanumeric; Non-repeat; Length=1000	The title of the source publication.	Journal of Mechanical Engineering
773v	Source Publication Volume	Alphanumeric; Non-repeat; Length=50	The volume of the source publication.	Volume 6
773w	Source Publication Control Number	Alphanumeric; Non-repeat; Length=30	Backfile Only. For analytic-subsidary records migrated to BASIS in 1995, this field holds the RECON Accession Number of an analytic parent.	N81-29902 20-66
787w	Relationship Information: Document ID of Related Item	Alphanumeric; Repeat; Length=50	The Document ID of an analytic primary (on subsidiaries), superseded record, or other related document. Also, the Document ID range of analytic subsidiaries (on parent record).	20020045549 20020045550 through 20020046594

<i>Field Tag</i>	<i>Field Name</i>	<i>Field Type</i>	<i>Definition</i>	<i>Examples</i>
937a	Available From	Alphanumeric; Non-repeat; Length=1000	<i>Identifies the organization from which the information may be obtained.</i>	<i>CASI; US Patent and Trademark Office; Issuing Activity (Israel Space Agency (ISA))</i>
937b	Availability Format	Alphanumeric; Group-repeat; Length=50	<i>Indicates the formats in which the information is available from CASI.</i>	
937d	Price Code	Alphanumeric; Group-repeat; Length=3	<i>Indicates the price code of the document.</i>	
937e	Availability Notes	Alphanumeric; Non-repeat?; Length=250	<i>Contains explanatory information about the availability of a document.</i>	<i>Abstract Only; For peaceful purposes only</i>
BLD	Database Load Date	Date(numeric); Virtual; Non-repeat; Length=8	<i>Date on which a record was loaded in BASIS.</i>	

NASA CASI Exchange Format: XML Format Description

This document describes the XML format used by the NASA Center for AeroSpace Information (CASI) for sending sets of metadata records from the NASA Aeronautics and Space Database to various exchange partners and other recipients. An example record-set containing one record is included, along with the XML DTD (Document Type Definition). The individual metadata fields that comprise a record are described in the **NASA CASI Data Dictionary**.

* Every data file begins with the following expressions:

```
<!DOCTYPE RECORD_SET SYSTEM "CASI_EXCHANGE_V1.dtd">
```

```
<RECORD_SET VERSION="1" PROCESSING_DATE ="20020525" LOAD_DATE_START="20020401"
LOAD_DATE_END="20020430" QUERY_NAME="CASI Monthly Issue"
DISTRUBUTION_LIMITATION="Unclassified/Unlimited/Publicly Available" NUM_DOCS="1">
```

* The first expression simply states the name of the CASI DTD. The second expression includes the following variables:

- (1) VERSION – the version number of the DTD.
- (2) PROCESSING_DATE – the date on which the data was extracted from the database.
- (3) LOAD_DATE_START – the start date in the load-date range (in cases where the population of extracted records is defined by the BASIS Load Date (BLD)).
- (4) LOAD_DATE_END – the end date in the load-date range (in cases where the population of extracted records is defined by the BASIS Load Date (BLD)).
- (5) QUERY_NAME – name of an established database query that was used to extract the record set
- (6) DISTRIBUTION_LIMITATION – designation of the distribution and security limitation of the data in the record set
- (7) NUM_DOCS -- the total number of records in the record-set.

* Every data file ends with the following:

```
</RECORD_SET>
```

* Individual records contained in the record-set start with the expression

```
<RECORD NUM="1">
```

where NUM is the sequential number of a record in the record-set (subsequent records would be “2”, “3”, and so on). Each individual record ends with the expression

```
</RECORD>
```

* Each data-field comprising a record is presented in the following format:

```
<D260z occ="1">Japan</D260z>
```

The field-tag is followed by the “occ” number that indicates the sequential occurrence for a particular

field in a given record. Fields that are defined as ‘non-repeatable’ (see Data Dictionary) will always show *occ*="1". Fields defined as ‘repeatable’ or ‘group-repeatable’ may have multiple occurrences within a single record, and would show an *occ* value of "1", "2", "3", etc.

* Note that the occurrence (*occ*) number is important for correctly associating related information, for example, ensuring that a particular author (field 700a) is associated with his affiliation (fields 710a_AA, 710b_AA, 710g_AA, 710j_AA, 710u_AA). Associated fields (i.e., group-repeatable fields) include the following:

[700a, 700e, 710a_AA, 710b_AA, 710g_AA, 710j_AA, 710u_AA] covering authors and their affiliations
[710a_FS, 710b_FS, 710g_FS, 710j_FS, 710u_FS] covering financial sponsors
[710a_MS, 710b_MS, 710g_MS, 710j_MS, 710u_MS] covering meeting sponsors
[710a_OS, 710b_OS, 710g_OS, 710j_OS, 710u_OS] covering organizational sources
[711a, 711c, 711d, 711f, 711g, 711n, 711z] covering meeting/conference information
[937b, 937d] covering availability format and price code

Below is an example of multiple fields whose relationship is defined by a shared occurrence number.

*Complete group of fields related to a particular author and his affiliation
(extracted from Example-1 below). [occ="2"]*

```
<D700a occ="2">McKeegan, Kevin D.</D700a_AA>  
<D700e occ="2">FROM</D700e>  
<D710a_AA occ="2">Case Western Reserve Univ.</D710a_AA>  
<D710b_AA occ="2">Dept. of Geological Sciences</D710b_AA>  
<D710g_AA occ="2">United States</D710g_AA>  
<D710j_AA occ="2">US Academic</D710j_AA>  
<D710u_AA occ="2">Cleveland, OH United States</D710u_AA>
```

[* Note the padding value "FROM" used in place of "Author" in d700e.]

* A line feed (end-of-line-character) should occur after the end of each record and after the end of all fields within a record (i.e., after </RECORD> and after an end-of-field indicator such as </D541e>).

* No line feeds should occur in the actual data of any field, including the Abstract (520b).

* Certain symbols that occur as part of the data itself will be replaced with codes as follows:

& will be replaced with "&";
> will be replaced with ">";
< will be replaced with "<";
' will be replaced with "'";
" will be replaced with """;

For example, the code ">" is used in place of ">" in the following title:

```
<D245a occ="1">Boundary layer conditions at Mach numbers &gt; 0.8</D245a>
```

The following characters will be included in the data as is: % * + - = () [] ! @ # \$. , / \ ? ; : All other symbols, special characters, superscripts and subscripts will be expressed in word-form according to the NASA CASI or another organization's verbalization guidelines.

* The field-tags are presented in the order specified in the DTD that appears at the end of this document.

EXAMPLE-1: RECORD-SET CONTAINING ONE RECORD

```
<!DOCTYPE RECORD_SET SYSTEM "CASI_EXCHANGE_V1.dtd">

<RECORD_SET VERSION="1" PROCESSING_DATE ="20020525" LOAD_DATE_START="20020401"
LOAD_DATE_END="20020430" QUERY_NAME="CASI Monthly Issue"
DISTRUBUTION_LIMITATION="Unlimited/Unclassified" NUM_DOCS="1">
<RECORD NUM="1">
<D090a occ="1">20020010237</D090a>
<D017c occ="1">No Copyright</D017c>
<D022a occ="1">ISSN 0016-7037</D022a>
<D041a occ="1">English</D041a>
<D0722 occ="1">NASA Subject Category Scheme</D0722>
<D072a occ="1">91</D072a>
<D072b occ="1">Lunar and Planetary Science and Exploration</D072b>
<D245a occ="1">Oxygen Isotopic Constraints on the Genesis of Carbonates from Martian
Meteorite ALH84001</D245a>
<D260a occ="1">Oxford</D260a>
<D260b occ="1">Elsevier Science Ltd.</D260b>
<D260c occ="1">19980301</D260c>
<D260d occ="1">March 1998</D260d>
<D260z occ="1">United Kingdom</D260z>
<D300a occ="1">12</D300a>
<D355a occ="1">Unclassified</D355a>
<D359a occ="1">Publicly available</D359a>
<D359c occ="1">Unlimited</D359c>
<D509a occ="1">Journal Article</D509a>
<D520b occ="1">Ion microprobe oxygen isotopic measurements of a chemically diverse
suite of carbonates from Martian meteorite ALH84001 are reported. The delta(sup 18)O
values are highly variable, ranging from +5.4 to + 25.3%, and are correlated with
major element compositions of the carbonate. The earliest forming (Ca-rich)
carbonates have the lowest delta(sup 18)O values and the late-forming (Mg-rich)
carbonates have the highest delta(sup 18)O values. Two models are presented which can
explain the isotopic variations. The carbonates could have formed in a water rich
environment at relatively low, but highly variable temperatures. In this open-system
case the lower limit to the temperature variation is approx. 125 C, with fluctuations
of over 250 C possible within the constraints of the model. Alternatively, the data
can be explained by a closed-system model in which the carbonates precipitated from a
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NASA CASI Exchange Format: XML DTD

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